REMARKS

Claims 3 and 20 have been canceled.

Claim 1 has been amended as supported by the Examples of the specification which use Teonex and Kapton (page 13, first full paragraph and page 14, line 6 of the specification) for the intermediate layer which is a non-porous material as further evidenced by the **Rule 132 Declaration** filed October 9, 2008 and by the attached **new Rule 132 Declaration for Kapton**.

Claims 1-8 and 13-19 are active in this application.

The attached **new Rule 132 Declaration** shows optical micrographs of Kapton 100H which is an aromatic polyimide film used as the intermediate layer in Examples 1 and 2 of the present application. The aromatic polyimide film does not have pores of at least 0.3 mm in diameter.

Also, enclosed is a product data sheet for Kapton 100H and an English translation thereof.

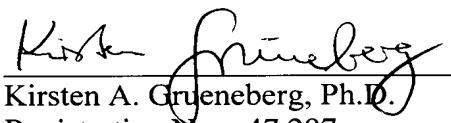
Accordingly, based on the Amendment filed herewith and the Rule 132 Declarations of October 9, 2008 and the Rule 132 Declaration filed herewith, the claims are now believed to be in condition for allowance.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed

representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon



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NFO:KAG\la

カプトン® 超耐熱・超耐寒性ポリイミドフィルム

カプトンの種類と特長

Hタイプ・Vタイプ

Hタイプ

ポリイミドフィルムカプトン®の標準タイプ

芳香族四塩基酸と芳香族ジアミンとの縮重合によって得られる、透明な黄金色のフィルムです。その類い希な耐熱性を始め、以下の様な驚くべき特長を併せ持つ多機能型ポリイミドフィルムです。

- 耐熱・耐寒性：常温での優れた機械特性は、高温領域においてもほとんど変わりません。
- 耐炎性：融点がなく、800℃以上でなければ炭化をはじめません。また、LOI(酸素指数)が有機材料の中では極めて高く、非延焼性です。
- 耐化学薬品性：ほとんど全ての有機溶剤に溶けず、高温においても高い耐化学薬品性を示します。
- 電気絶縁性：高い絶縁破壊電圧、小さな誘電正接などの優れた電気特性は、広い温度範囲及び周波数範囲においてほとんど変わりません。

機械的特性 | 熱的特性 | 電気的特性 | 化学的特性 | 製品規格

Vタイプ

低熱収縮タイプ

カプトン®Vタイプはタイプの特性を活かし、寸法安定性を向上させた、熱収縮率の小さいフィルムです。

熱収縮以外の諸特性はHタイプと変わりありません。

機械的特性 | 熱的特性 | 電気的特性 | 化学的特性 | 製品規格

(Translation)
Type H·Type V: DuPont-Tray Co., Ltd. Page 1/1

Home>Product guide>Kapton (polyimide film)>Types and merits of Kapton>Type H·Type V

Kapton® Super heat resistant and super cold resistant polyimide film

Types and Merits of Kapton

Type H and Type V

Type H

Standard type of Polyimide film Kapton®

This is a transparent golden film obtained by condensation polymerization of an aromatic tetrabasic acid and an aromatic diamine. It is a polyimide film of multifunction type having the following amazing merits including peerless heat resistance in combination.

•Heat resistance and cold resistance: The mechanical properties excellent at room temperature hardly change in a range of high temperatures.

• Flame resistance: It does not have a melting point, and does not begin carbonization at a temperature not higher than 800□. Further, its LOI (Oxygen index) is extremely large among the organic materials, and has no flame spreadability.

• Chemical resistance: It is not dissolved in almost all of organic solvents, and exhibits good chemical resistance at high temperatures.

• Electrical insulating properties: Excellent electrical properties such as a high dielectric breakdown voltage and a small electric dissipation factor hardly change over a wide temperature range and frequency range.

Mechanical properties | Thermal properties | Electrical properties | Chemical properties | Products specification

Type V

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